

Parameters of Concern And Their Effects on Agricultural Water Quality		
Parameters	Rationale	Sources
Salinity (TDS & EC)	In general, salts influence plant growth by depriving the roots of water. In agronomic systems saline conditions can translate into potential yield reduction. Crops vary in their tolerance of salinity. Many of the highest value crops are the most sensitive.	Mineral weathering, irrigation water, seawater. Saline lands and shallow groundwater, are intermediate repositories, not sources.
SAR (Sodium relative to calcium and magnesium)	Elevated SAR levels in irrigation water can degrade soil structure and reduce permeability, making water and crop management difficult. Sodium as such can be toxic to sensitive (woody) plants.	Mineral weathering, irrigation water, seawater. Subsurface drainage waters are usually enriched in sodium.
Chloride	Elevated levels of chloride reduce plant vigor and yield. As with sodium, woody plants (fruits and nuts) are especially susceptible.	Mineral weathering, irrigation water, seawater. Subsurface drainage waters are sometimes enriched in chloride.
Boron	Surface waters usually do not contain boron at toxic levels. Plant stress and yield reduction are potential hazards. Leaching boron can require two to three times the water needed to leach other salts.	Geologic, groundwater
pH	Influence tendency of low-volume irrigation systems to plug with precipitate. Precipitate may also reduce quality of greenhouse production.	Mineral balance in water
Turbidity	Increases maintenance requirements on conveyance and application infrastructure due to siltation and plugging. Accelerates loss of reservoir capacity and increases dredging costs..	Delta & tributary watersheds during flood events
Nutrients (Nitrate)	Nutrients in irrigation water can provide fertilizer benefits. However, excessive fertilization can cause excessive vegetative growth and reduce yield or quality of certain crops.	Municipal wastewater, agricultural drainage
Temperature	Low water temperatures reduce rice seedling emergence and crop development	Solar energy

Urban Water Quality: The parameters of concern to drinking water quality include those that impact or originate from the following:

1. Source Protection
2. Sea Water Intrusion
3. Agricultural Drainage
4. Municipal Waste Discharges
5. Local Runoff
6. Recreational Boating
7. Protozoan Parasites
8. Pesticides
9. Metals - As, Cd, Pb, Cr, Fe, Cu